PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT-AB05018J		FOR FURTHER ACTIO)N	See Form PCT/IPEA/416		
International application No.		International filing date (da	y/month/year)	Priority date (day/month/year)		
PCT/	JP2005/003053	24.02.2005		01.03.2004		
International Patent Classification (IPC) or national classification and IPC C07H21/04, C12N15/09 Applicant JAPAN SCIENCE AND TECHNOLOGY AGENCY						
		reliminary examination report, e		nternational Preliminary Examining Authority		
	his REPORT consists of a total			g this cover sheet.		
3. T	his report is also accompanied b	y ANNEXES, comprising:				
a	. (sent to the applicant	and to the International Bureau)	a total of1	sheets, as follows:		
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).					
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.					
ь	b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))					
	, containing a sequence listing and/or tables					
	related thereto, in comp Section 802 of the Adm	•	cated in the Suppler	mental Box Relating to Sequence Listing (see		
4. T	his report contains indications r	elating to the following items:				
	Box No. I Basis o	f the report				
	Box No. II Priority					
	Box No. III Non-es	ablishment of opinion with regar	d to novelty, inventi	ive step and industrial applicability		
	Box No. IV Lack of	unity of invention				
	BON I.O. V	ed statement under Article 35(2) vs s and explanations supporting suc	-	ty, inventive step or industrial applicability;		
	Box No. VI Certain documents cited					
	Box No. VII Certain	defects in the international applic	cation			
	Box No. VIII Certain	observations on the international	application			
Date of submission of the demand		Date	of completion of thi	s report		
Name and mailing address of the IPEA/JP			orized officer			
_						
Facsimile No.			ohone No.			

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2005/003053

Вох	No. I	Basis of the report					
1.		n regard to the language , this report is based on the internat cated under this item.	ional application in the language in	which it was filed, unless otherwise			
			report is based on translations from the original language into the following language, h is the language of a translation furnished for the purposes of:				
		international search (Rule 12.3 and 23.1(b))					
		publication of the international application (Rule 12	2.4)				
		international preliminary examination (Rule 55.2 and	nd/or 55.3)				
2.	rece		ard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the goffice in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to rt):				
		the international application as originally filed/furnished					
	\boxtimes	the description:					
		pages 1-7		as originally filed/furnished			
		pages*	received by this Authority on				
		pages*	received by this Authority on				
	\boxtimes	the claims:					
		nos3-8,10		as originally filed/furnished			
		nos.*	as amended (together	er with any statement) under Article 19			
		nos.* 2,9,14	received by this Authority on	10.01.2006			
		nos.*	received by this Authority on				
		the drawings:					
		sheets		as originally filed/furnished			
		sheets*					
		sheets*	received by this Authority on				
	\boxtimes	a sequence listing and/or any related table(s) – see Supple	mental Box Relating to Sequence I	Listing.			
3.	\boxtimes	The amendments have resulted in the cancellation of:					
		the description, pages					
		the claims, nos. 1,11–13					
		the drawings, sheets/figs					
		any table(s) related to sequence listing (specify):					
4.		This report has been established as if (some of) the ame they have been considered to go beyond the disclosure as					
		the description, pages					
		the claims, nos.					
		the drawings, sheets/figs					
*	If ite	em 4 applies, some or all of those sheets may be marked "sı	iperseded."				

International application No.
PCT/JP2005/003053

Box		nations supporting such statement	
1.	Statement		
	Novelty (N)	Claims _ 2-10, 14	_ YES
		Claims	
	Inventive step (IS)	Claims 2-10, 14	YES
		Claims	
	Industrial applicability (IA)	Claims 2-10, 14	YES
		Claims	
2.	Citations and explanations (Rule 7	70.7)	
۷.	•	hiro OHKUBO et al., "A new strategy for	
		e synthesis of oligodeoxynucleotides	
		rected towards perfect O-selective	
		ternucleotidic bond formation without base	
	-	otection," Tetrahedron Letters, 2004, Vol.	
	·	No. 2, pages 363 to 366	
	_	ciech DABKOWSKI et al., "2,4-	
		nitrophenol: a novel activating reagent in	
		cleotide synthesis via the phosphoramidite	
		ute. Design of new effective	
	_	osphitylating reagents," Tetrahedron	
		tters, 2000, Vol. 41, No. 39, pages 7535	
		7539	
		2003-2895 A (President of the Tokyo	
		stitute of Technology), 08 January 2003	
		11-80185 A (Japan Science and Technology	
		cp.), 26 March 1999	
		2003-28871 A (Fuji Photo Film Co., Ltd.),	
		January 2003	
	Document 6: JP	62-51695 A (Yuki Gosei Kogyo Co., Ltd.),	
	06	March 1987	

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claims 2 to 10 and 14

Documents 1 to 6 do not disclose or suggest the feature wherein a mixture that comprises an alcohol-type compound and an acid catalyst is used during the synthesis of nucleic acid oligomers by means of a phosphoramidite technique.

On the other hand, the inventions set forth in claims 2 to 10 and 14 exhibit an advantageous effect in that side reactions are suppressed and the condensation efficiency is increased as a result of using a mixture that comprises an alcohol-type compound and an acid catalyst; furthermore, it would not have been easy for a person skilled in the art to predict the effects in question based on the disclosures in documents 1 to 6.

Such being the case, the inventions set forth in claims 2 to 10 and 14 are novel and involve an inventive step in relation to the inventions disclosed in documents 1 to 6.

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Supplemental Box Relating to Sequence Listing			
Continuation of Box No. I, item 2:			
1.	With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this report was established on the basis of:		
	a. type of material a sequence listing table(s) related to the sequence listing b. format of material in written format in computer readable form c. time of filing/furnishing contained in the international application as filed filed together with the international application in computer readable form furnished subsequently to this Authority for the purposes of search and/or examination		
	received by this Authority as an amendment* on		
2.	In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.		
*	If item 4 in Box No. I applies, the listing and/or table(s) related thereto, which form part of the basis of the report, may be marked "superseded."		